

WASHINGTON STATE DEPARTMENT OF ECOLOGY
P.O. Box 47600
Olympia, WA 98504-7600

APPLICATION OF:)	
)	No. PSD X-88-01, Amendment 2
Goldendale Aluminum Company)	AMENDED APPROVAL OF
85 John Day Dam Road)	APPLICATION TO CONSTRUCT
Goldendale, Washington 98620)	
)	

Pursuant to the regulations for the Prevention of Significant Deterioration (PSD) set forth by Washington Administrative Code 173-400-141 and Title 40, Code of the Federal Regulations, Part 52, and based upon the complete application submitted on March 31, 1988, a Final Approval issued on August 12, 1988 by the Regional Administrator, and a request to modify the approval submitted on November 25, 2002, we now find the request to modify the approval complete.

FINDINGS

- A. Amendment 2 to this approval is to fix a number of small typographical errors identified as the permit is being incorporated into an Air Operating Permit. None of the typographical errors relate to allowable emissions, just correcting spelling errors and permit condition references that were not updated from the preliminary Amendment 1, and the final Amendment 1. Amendment 2 is solely administrative and does not require public notice.
- B. In 1978, the Environmental Protection Agency (EPA) issued PSD approval No. PSD X78-02 authorizing the construction of a third cell line and other improvements at the Goldendale Aluminum Company's primary aluminum reduction plant. In 1988, EPA issued a revised PSD approval (PSD X-88-01) to modify and supercede the 1978 approval. In 1995, EPA issued a letter amendment to the 1988 approval increasing the carbon monoxide emission limitation to correct an error in the 1978 approval that had not been corrected in the 1988 revision.
- C. The 1978 projected emissions indicated that the project had the potential to emit more than the EPA significant levels for sulfur dioxides (SO₂), carbon monoxide (CO), total suspended particulates (TSP) and fluorides (F), and is therefore subject to PSD review for these pollutants.
- D. The plant is located in an area that was and still is designated as "Class II" under Section 162(b) of the Clean Air Act.
- E. Dispersion modeling analyses for SO₂, TSP, CO, and F was conducted in conjunction with the applications for the 1978 and 1988 approvals. These analyses demonstrated that while emissions of these pollutants increased, they did not cause any violations of the applicable National Ambient Air Quality Standards or PSD increments so long as the plant expansion is

operated in accordance with the conditions specified below. With the application of best available control technology, as required by the federal and state Clean Air Acts, 40 CFR 52.21 and Chapter 173-400, WAC, operation of the emission units will meet the applicable PSD requirements.

- F. On November 25, 2002, a request to amend this approval was submitted by Goldendale Aluminum. The request is to add emission limitations and other criteria to address the cold startup of a cell line. The following specific changes are made to the original approval:
- a. Original Approval Condition 2 is being deleted to better conform the limitations of this approval to the requirements of the Air Operating Permit program.
 - b. Cell line and plant startup criteria, per the November 25, 2002 request are incorporated as new Approval Condition 2.
 - c. Approval Condition 1.c. has been undated to incorporate the carbon monoxide emission limit modifications accepted by EPA in their March 28, 1995 letter to Mr. Wayne Wooster of Columbia Aluminum Corporation (now Goldendale Aluminum) from Phil Millam, Acting Director, Air and Radiation Program, Environmental Protection Agency Region 10.
 - d. Emission testing and monitoring requirements applicable for cells line sections(s) and cell lines in startup mode have been added to Approval Condition 5.
 - e. The approval has been renumbered for easier cross referencing.
- G. Accordingly, it is hereby determined that, subject to the conditions set forth below, Goldendale Aluminum will be permitted to operate the primary aluminum reduction facility at Goldendale, Washington.

APPROVAL CONDITIONS

1. Except as provided by Approval Condition 2, emissions of sulfur dioxide, total suspended particulates, carbon monoxide and fluoride shall not exceed the emission limits set forth below:
 - a. Particulate Matter (including PM₁₀)
 - i. The plant-wide monthly average emissions shall not exceed 8.0 pounds per ton of aluminum produced.
 - ii. The plant-wide running twelve-month average emissions shall not exceed 6.0 pounds per ton of aluminum produced.
 - iii. The plant-wide mass emission rate shall not exceed 3,432 pounds per day and 555 tons per year.
 - b. Total Fluorides
 - i. The plant-wide monthly average emissions for the plant shall not exceed 2.0 pounds per ton aluminum produced.
 - ii. The plant-wide running twelve-month average emissions shall not exceed 1.6 pounds per ton of aluminum produced.
 - iii. The plant-wide mass emission rate shall not exceed 1,010 pounds per day and 148 tons per year.

- c. Carbon Monoxide
 - i. The plant-wide monthly average emissions shall not exceed 366 pounds per ton of aluminum produced.
 - ii. The plant-wide mass emission rate shall not exceed 187,000 pounds per day.
 - d. Sulfur Dioxide
 - i. The plant-wide running twelve-month average emissions shall not exceed $4.14 (\%S) + 1.55$ or 14.0 pounds per ton of aluminum produced (where %S is the percentage of sulfur by weight in the coke used to make the anode mix).
 - ii. The plant-wide mass emission rate shall not exceed $2,097 (\%S) + 786$ or 7,077 pounds per day of aluminum produced.
- 2. Startup of a shutdown cell (pot) line or cell section (pot line section). Startup can consist of the restart of a shutdown (de-energized) cell line (cell line restart) or the restart of one or more sections of an operating cell line (cell line sections(s) restart).
 - a. Startup is defined as:
 - i. The day the first cell in an existing or a new cell line is energized, or
 - ii. The day the first cell in the cell line section(s) is energized when only a cell line section(s) is being energized.
 - b. Startup for the cell line or cell line sections(s) ends the date the first of the following criteria occurs:
 - i. When a whole cell line is being restarted, 180 days has elapsed since the first cell has been energized, or
 - ii. When a cell line section(s) is being restarted (per approval condition 2.a.ii.),
 - A 120 days after the first cell in the cell line section has been energized, or
 - B The date the last cell energized in the energized cell line section(s) has attained stable operation per the Startup, Shutdown, and Malfunction Manual referenced in Approval Condition 4.c.
 - c. The emissions from a cell line meeting the criteria in Approval Condition 2.a. are excluded from calculating compliance with the limitations in Approval Conditions 1.a.i, 1.a.ii, 1.b.i, 1.b.ii, 1.c.i, and 1.d.i.
 - d. The emissions from a cell line meeting the criteria in Approval Condition 2.a. are required to be included in determining compliance with the limitations in Approval Conditions 1.a.iii, 1.b.iii, 1.c.ii, and 1.d.ii.
 - e. During startup, the Startup, Shut down, and Malfunction Plan developed to comply with 40 CFR Part 63, Subparts A and LL will be followed in order to minimize emissions and maximize the speed by which the facility is returned to normal operation.
 - f. A cell line or cell line sections(s) undergoing startup shall follow the monitoring, and work practices criteria in Approval Condition 4.a and 4.b.
 - g. A shutdown cell line or cell line section is indicated when the cell line or cell line section has been de-energized and the cryolite bath has solidified.
- 3. Goldendale Aluminum shall notify the Washington Department of Ecology (Ecology) of any occurrence of any emissions in excess of limits specified in Condition Number 1; such notification shall be submitted to Ecology as required by WAC 173-400-107. Goldendale Aluminum shall contemporaneously send a copy of all such notifications to EPA.

4. Compliance with emission limitations shall be demonstrated through a program of emission testing and compliance monitoring as described below:

a. Emissions Testing

i. Normal Operations

Testing for compliance with the emission limitations shall be conducted using testing and sampling methods approved by the Ecology or EPA. The testing and sampling procedures shall be representative of the entire plant operation. The testing frequency for the secondary system shall be at least four fans per line per month (two fans each in two different sections) tested at four points per fan. The pounds per day emission rate shall be calculated by multiplying the monthly average emission rate in units of pounds per ton of aluminum produced by the actual daily aluminum production rate.

ii. Startup Operating Condition

These emission testing conditions apply while a cell line or a cell line section(s) are in startup mode per Approval Condition 2. Testing for compliance with the emission limitations shall be conducted using testing and sampling methods approved by the Ecology or EPA. The testing and sampling procedures shall be representative of the startup emissions actually occurring. The secondary control system emissions testing shall consist of testing two (2) fans per month per cell line covering the section(s) in startup mode. There shall be at least four (4) sample points per fan. As a cell line section ends startup mode and enters normal operations, the secondary control system emissions testing for that cell line section shall conform to the testing program described in Approval Condition 4.a.i.

b. Compliance Monitoring and Work Practices

i. Goldendale Aluminum shall conduct and record results of inspections of ore coverage on the reduction cells, collector skirt condition, burner condition, burner vacuum, and any other pertinent information relative to gas and fume collection at each cell, as may be agreed between Ecology and Goldendale Aluminum. The inspection personnel shall be organizationally independent of the department of the company responsible for operations. These inspections shall be conducted at least once per week. The inspection records shall be maintained for inspection and shall be supplied to Ecology or EPA upon request.

ii. The Company shall implement and enforce work practices to maximize the capture of cell off-gases by the primary collection and control system and minimize emissions to the secondary collection system.

c. Startup, Shutdown, and Malfunction (SSM) Recordkeeping, Monitoring and Reporting. Goldendale Aluminum will follow the record keeping and reporting requirements in the SSM plan as required by 40 CFR 63.10(b)(2) and 40 CFR 63.850(c)(2). The SSM plan shall be updated as necessary to incorporate revised work practices and procedures. The Department of Ecology shall be informed in writing whenever the SSM plan is updated.

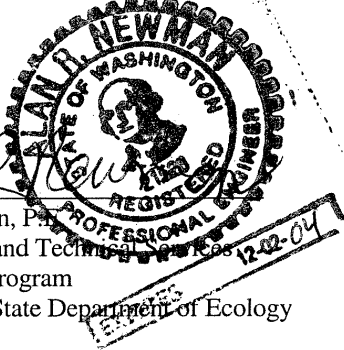
d. Shutdown Cell Line Sections(s) and Shutdown Cell Line(s)

The emission testing, compliance monitoring, and work practice requirements in Approval Conditions 4.a and 4.b do not apply to a shutdown cell line or cell line section. At the time a cell line or cell line section is completely de-energized and the

cryolite bath in all shutdown pots has solidified, the cell line section is considered to be shutdown.

5. Goldendale Aluminum shall notify Ecology which cell line(s) or cell line section(s) have been started up or shutdown during the month as part of the monthly monitoring report. When a cell line(s) or cell line section(s) will be started up, Goldendale Aluminum shall inform Ecology, at least three (3) days prior to startup, how many sections or lines will be restarted, and the anticipated date startup mode will end.
6. This permit amendment supersedes and cancels the original terms and conditions of the 1988 PSD permit (No. PSD X-88-01).
7. Any activity which is undertaken by Goldendale Aluminum, or others, in a manner which is inconsistent with the application and this determination shall be subject to Ecology or EPA enforcement under applicable regulations. Nothing in this determination shall be construed so as to relieve Goldendale Aluminum of its obligations under any state, local, or federal laws or regulations.
8. Access to the source by Ecology, or the U.S. Environmental Protection Agency (EPA), shall be permitted upon request for the purpose of compliance assurance inspections. Failure to allow access is grounds for action under the Federal Clean Air Act or the Washington Clean Air Act.

Prepared by:


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Washington State Department of Ecology

Nov. 14, 2003
Date

Approved by:

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14 Nov. 2003
Date